

THE
TROY & GREENFIELD RAILROAD.

ARGUMENT OF E. HASKET DERBY, ESQ.,

DELIVERED FEB. 29TH, 1856.

BEFORE
A JOINT SPECIAL COMMITTEE

OF THE

LEGISLATURE OF MASSACHUSETTS,

IN BEHALF OF THE

TROY AND GREENFIELD RAILROAD COMPANY;

PETITIONERS FOR A

STATE SUBSCRIPTION TO THEIR STOCK.

PHONOGRAPHIC REPORT, BY A. J. MARSH.

BOSTON:
PRINTED BY BAZIN & CHANDLER, 37 CORNHILL.
1856.

385.4
T75ms
pam

ARGUMENT OF E. HASKET DERBY, ESQ.

BOSTON, Friday, Feb. 29th, 1856.

The Committee met in Lobby N. 13, and Mr. Lee, Senator from Worcester, the Chairman called the Committee to order at 3 o'clock. He said:

Gentlemen of the Committee.—This is a special Committee appointed to hear the petitioners of the Troy and Greenfield Railroad Company. We had one meeting on the 20th inst., for organization, and the choice of a Secretary, and adjourned until to-day, giving the parties interested notice of this adjournment. We now call upon the petitioners to come forward and be heard, and as some of the Committee were not present when the petition was read at the last meeting, I will call for its reading again.

E. HASKET DERBY, Esq., said he had the honor to appear in behalf of the Troy and Greenfield Rail Road Company, and read their petition, which has already been printed for the use of the Legislature.

Mr. DERBY then addressed the Committee as follows:—

Mr. Chairman and Gentlemen,—Before you decide whether to grant or not to grant the prayer of the petitioners it is proper that I should present to you some outlines of their case, which, though feebly shadowed forth in the petition which I have just read, is not there presented in a way to do full justice to the cause you are called upon to consider.

In determining whether you will grant the aid of the State subscription to the great enterprise of these petitioners, it will be proper to glance for a moment at the condition of the State itself, and her relative position in the country. Massachusetts is but a small State. I might say as Webster once said of Austria and her relation to Europe, Massachusetts is but a patch upon the surface of the United States. It is a very important patch, however, gentlemen, in the constellation of States. It contains 7,500 square miles of surface. Carve Ohio into States of equal size, and she will make five like Massachusetts. Divide the Union into sections of the same area as Massachusetts and you would find 400 States composing the Union. I include of course, all the Western Territories of the United States. Massachusetts is peculiarly a granitic State, although that title has usually been accorded to New Hampshire. It is naturally sterile. We have, gentlemen, some fertile vales, and intervals more appropriate for mowing and pasture than for the production of grain, but as an agricultural State Massachusetts stands behind the other States of the Union. There are single counties in New York, Pennsylvania and Ohio, which produce more grain and breadstuffs than the entire State of Massachusetts. The last census shows that in each of the counties of Butler, Ohio, and Lancaster, Pennsylvania, more breadstuffs of all kinds are produced annually than in the whole State of Massachusetts. Each of these counties produces from three to five millions of bushels of grain annually, while the State of Massachusetts produces little more than three millions, and comparing decade with decade, we find that the quantity grown in Massachusetts is steadily diminishing.

But, gentlemen, while Massachusetts is comparatively poor in agriculture, she is a great State in other particulars, and she reaches out her arm for breadstuffs and other provisions, to the more prolific regions of the West. For although sterile, herself, she has here a colony of men, growing and expanding year after year,

who are devoted to other employments, which draw the produce from more distant States. Massachusetts stands to-day one of the first States of the Union in population. She has, by the census of last year, 1,131,000 people; and, small as she is, in many departments, she takes the lead of her sister States. Small as she is, she still takes the lead in manufactures. By that census of her industry which will be reported to you in a few days, her manufactures must be nearly \$200,000,000 annually, at least such is my prediction.

She is first still, gentlemen, in the department of education, in mental cultivation and improvement. First still, in her public charities which have drawn somewhat largely upon her finances, but have returned her a hundred fold in glory and honor elsewhere—I may say throughout the world. In reading a few days since, with satisfaction and pleasure, a report made to the Government of England, I was struck with the remark that England had taught nations “how to live,” but since Massachusetts has devoted so much attention to the cultivation of the mind that wreath of glory now bloomed for the brow of Massachusetts. Massachusetts teaches the world how to think as well as how to live.

Although not first in navigation, Massachusetts is one of the first, I think she is the second State in the Union in the amount of her navigation. She has over a million of tons of shipping to-day, one-fifth the aggregate tonnage of England, and close upon one-fifth of the tonnage of the whole United States. She is first still in the fisheries, the whale fishery, the mackerel fishery, and the cod fishery, and she is the second State in commerce.

She is the second or third State in the Union in the amount of her wealth. Poor as the soil is, the accretion upon that soil makes her one of the richest States in the Union. Small as she is in comparison with other States, she is possessed of the largest population to the square mile, and she has an amount of intelligence, wealth, and resources, quite adequate to cope with the undertaking I have the honor to present this afternoon to your consideration.

I remarked, gentlemen, that we must look elsewhere for the wheat fields and the corn fields of Massachusetts; for the fields which display those silken tassels and those golden ears, so beautifully and eloquently depicted by Mr. Everett, in his address at the National Agricultural Exhibition, last Autumn. We must look for these in the rich bottoms of the Western States, and it is to reach the immense wheat and corn fields of these States, upon which we rely, that we essay this important undertaking.

It has been ascertained in Great Britain (and I suppose, gentlemen, we may measure the capacities of New England men by the standard of England,) that every inhabitant requires upon an average, fourteen bushels of corn, or its equivalent in bread-stuffs of some description, every year. Now, we produce in Massachusetts less than three and a half millions of bushels, and as our population is 1,150,000 to-day, and increasing some fifty per cent. every ten years, it is easy for you or for me to compute what amount of breadstuffs we require at present, and what will be required in the future, for our own consumption. You will recollect that the land is stationary, while the people are increasing and multiplying. If fourteen bushels are required per head, some seventeen or eighteen millions are needed in the aggregate, and of this nearly fourteen millions must be imported from other States, to feed the population of Massachusetts. I have endeavored to reduce this to some specific amount of tonnage, and the result is approximate, of course, that the supply of breadstuffs required to be brought into Massachusetts annually amounts to 300,000 tons. Then in addition to this we require at least, two-thirds as much more in the articles of cattle, swine, sheep, salt provisions, butter, cheese, pork and lard, which come from the West, for the maintenance of our people. We must require those who supply these articles, with fish from our fisheries, oil gathered from the ocean, the products of our manufactures, or the imports which we draw from foreign regions. When you add together the 300,000 tons of corn, some 200,000 tons of other provisions, and perhaps 100,000 tons more of what we may call raw material, hemp, lead, leather, and other articles, which are annually used in our manufactories,—all of which must be brought into Massachusetts, and

then add to this sum 200,000 or 300,000 tons of fish, oil, and the varied manufactures of New England, which go to the West, you make an aggregate of commerce between the East and West, which now seeks routes more or less circuitous of at least 700,000 or 800,000 tons to-day. This commerce will well nigh double every decade, and is becoming more and more important, so that if my estimates are too large for to-day they will not be large enough for to-morrow.

Now, gentlemen, allow me to present to you this proposition. If by the instrumentality of a Railroad through the Hoosac Mountain to Troy, or by any other enterprise, we could succeed in reducing by one-half the cost of transporting this produce from the West to the East, and these articles of manufacture and the proceeds of the fisheries from the East to the West, how material would be the effect upon the profits of the industry of Massachusetts? The Western Railroad Co., gentlemen, as we learn from their reports, annually disseminated through the Legislature, charge for transportation from Albany to Boston, not less than five dollars per ton. The lowest point in their tariff has been three dollars, and perhaps the highest is seven dollars, but take the average between the lowest and the highest, and the charge is five dollars per ton. If I can present to you our improvement as reducing this expenditure one-half, (and it is able to do it,) and effecting a reduction of two dollars and a half or over two dollars per ton, is not that an important item of saving? Apply this reduction to the 800,000 tons of commerce per annum, and you arrive at a saving annually not merely of the amount we ask you to subscribe to the stock of this enterprise, but a saving annually to the State of Massachusetts of \$1,600,000 to \$2,000,000, which is more than the estimated cost of the tunnel to be bored through the Hoosac Mountain. Permit me, gentlemen, to suggest to you that in these times, when economy is demanded by the community, when the prices of breadstuffs are so high, and the cost of living so much enhanced, a measure calculated to save one or two millions of dollars annually to the people of Massachusetts, is one deserving of the very serious consideration of those who represent the industry and the wealth of the State.

It is not, however, alone to the domestic trade of Massachusetts, and the supply of her people, that I seek to call your attention. I would advert also, to the foreign trade of Massachusetts. I hope to be able to show you that we can build up a vast foreign trade for our sea ports—for the ports of Boston, Salem, Newburyport and others, which are alike interested in this measure. Permit me to suggest to you gentlemen, for I see the county of Essex is well represented in this committee, that the ports of Salem and Newburyport will save, in the reduction of the cost of transportation, by the opening of this route, even more than the port of Boston itself. The matter of foreign commerce, gentlemen, is one of great importance, in the consideration of this question.

What is the foreign commerce of the United States to-day, and what is it to become hereafter? It is no longer mainly the export of cotton and other products of the South, and the import of manufactures from abroad; but a new commerce is springing up, of peculiar importance to the Northern States. It is the exchange of the provisions of the Northern States for the products of the labor of the old world, where the soil has been gradually exhausted or overpeopled. Ten years since it was the policy of the United States to encourage manufactures at home, while at the present time it would seem to be the policy of the nation to manufacture in Europe, sending out the productions of the West to exchange for European manufactures. Whether this policy be wise or unwise it is not for me here to inquire; we have only to deal with the fact as it is. It has been the custom of Massachusetts always to adapt herself to the existing state of things, whatever it might be, upon the land and upon the ocean, in manufactures and in commerce, and I do not doubt that she will continue so to adapt herself. In the commercial interchange of the products of the West for those of Europe she has ever been ready to take her part, and I think, gentlemen, at the present time, when this great foreign commerce, this interchange of breadstuffs for the manufactures of Europe is springing up and expanding day by day, Massachusetts with her millions of tons of shipping and her numerous important sea ports, has a right to

demand of this committee, and through them of the State Legislature, that some attention be paid to the improvement and development of her foreign commerce.

Massachusetts is noted as the School of the Union for the education of Seamen. She has always nourished and reared this hardy class in her coastwise trade, and in her fisheries, along the shores of her capacious bays. Her sea coast, including these numerous indentures, is as large as that of any other State. Upon those Capes, and particularly upon Cape Cod, are reared the masters of our ships and the mariners of the nation; and finally through our foreign commerce, the enterprising and honorable merchants who are conducting the commerce of this great country. Then, gentlemen, I respectfully submit that if by this route we can enable Massachusetts to participate to a great extent in this foreign commerce, it deserves the care and cultivation of the State.

Let us glance for a moment at the nature, the character and extent of this commerce, and how the products of the West destined for Europe pass to the ocean. A half century since the route for this commerce, then barely beginning to exist, was not by its present course to the sea. There were two outlets only for the produce of the West. It followed the chain of the lakes, and down the stormy St. Lawrence, and found its way through a mouth sealed up one-half of the year by solid ice, and enveloped in dangerous fogs the other half, difficult of access, turbulent and stormy; or it sought the mighty Mississippi, following it down to the Gulf of Mexico, through unhealthy and feverish regions, where the lives of men were imperilled, and property often perished.

But some thirty or forty years ago, the eye of genius was directed to a better mart, and the wealth and intellect of New York were drawn towards the connection of the great chain of lakes with the sea-board. DeWitt Clinton took an early, active, and decided part in this great project, and it is somewhat to the credit of my native State, and your native State, gentlemen, that when the idea of the great canal was started, New York sent to Massachusetts to take pattern by the Middlesex Canal — the first Canal as well as the first Railroad in the United States having been built in Massachusetts. It was found there was only one chasm in the Alleghany range through which a canal could be directed to the sea-board, and that was through the Mohawk Valley. The waters of the lakes could be made to flow directly towards old Massachusetts Bay. The water was found to flow around from Lake Erie, parallel to Lake Ontario, onward nearly to the Mohawk Valley, with no important summits to be surmounted. The Canal was excavated, carrying products to the sea by a gradual descent, and with no material counter ascents. It has since been gradually enlarged, and enlarged again, has formed the line for important railway improvements, and is now expanding to the capacity of a Ship Canal, floating vessels of some 200 tons. By this channel the annual commerce of the vast interior has for years found its way to the deep, from Ohio, Illinois, Indiana, Michigan, Wisconsin, Iowa, from Kansas and Nebraska, from the very base of the Rocky Mountains. It turns neither to the right nor left, to seek New Orleans nor Quebec, the Mississippi nor the St. Lawrence, but tends onward in a vast stream till it strikes the Mohawk Valley, onward till it meets the Hudson River, onward till it strikes the very flank of the Hoosac Mountain! It would have continued onward to the Bay State, but for this interposition of the mountain by the Providence of God, in its direct course towards the ocean, towards England, towards Europe. It was only this little obstacle interposed by nature for the genius and science, and energy of Massachusetts to overcome, and thus win another crown of glory to the old Commonwealth—it was only this providential obstacle which turned this vast tide of commerce, and sent it at a right angle from the flank of the Hoosac, to enrich the Island of Manhattan.

Here this commerce has built up a population of 900,000 people, making New York the third city of the civilized world, and soon to be the first. It has made it the centre of the commerce of the Union, and it is giving it annually an accession of some 40,000 people, and thirty or forty millions of dollars. All this was accomplished by the impulse given by this great channel of trade, for previous to its opening, the population of New York had been almost stationary. But it is not

necessary to expand upon what New York has been and what it is to-day, in consequence of this tide of commerce. It stands before you, the city of palaces, the great commercial metropolis of the country.

If you will apply a tape to any map of the Eastern States, placing one end at the city of Troy, and swinging the other around from New York to Boston, you will find that the air line to Boston is actually three miles shorter than to New York. Go a step further and you find that a direct line from the Mohawk Valley, and from the Great West to the British Provinces passes directly through the City of Boston. These Provinces which require such vast amounts of breadstuffs every year, are directly on a line with Boston, and the granaries of the West. Continue your line across the ocean to the city of Liverpool, and you find that it still passes directly through the city of Boston. Our metropolis is exactly on the way. And you will find further, that the freight which turns from the flank of the Hoosac is actually some 50 miles further from Liverpool when it arrives at New York than before it started from Troy. In conducting the commerce with Liverpool, the city of Boston, (and I may include Salem and Newburyport,) has an advantage of some 200 miles over New York, in the actual distance from port to port. If you move one step further to the East, you will be struck with another geographical feature. There stands the city of Portland, a few years since comparatively insignificant in commerce, but now the terminus of thousands of miles of Railroad, extending far up the great Lakes, and even to Lake Huron, built not by Portland alone, although she aided, by granting her credit. You find this city fast drawing off our commerce, although possessing no advantage of proximity to Liverpool over Boston, because by the jutting out of the peninsula of Nova Scotia, she loses as much as she gains by the difference in the air line to Liverpool. These facts have an important bearing upon the questions we are here to discuss. The direct route from the West to Europe is *via* Boston, and the direct route from New York to Europe is *via* Boston; and, if, gentlemen, we can, by the exertions of intelligence and science break through the barrier of this mountain, we are but placing the channel of communication where it ought to be. We ought to be upon the great line of communication between the East and the West.

Upon the completion, Mr. Chairman and gentlemen, of the Erie Canal, the great impulse given to the city of New York by the opening of that communication, led the citizens of Massachusetts to aspire to a participation in the advantages of this avenue. The idea occurred of constructing a canal to communicate with New York. Some thirty years since, I think it was in 1825, there were explorations made for the purpose of establishing a canal route between Boston and the West. Several skilful engineers and men of genius were brought into the field, and among them Gen. Dearborn, formerly collector of the port of Boston, a man who stood high in the respect and confidence of Massachusetts. Another was Loammi Baldwin, one of the ablest and most accomplished engineers on this side of the water. They availed themselves also of the services of Gen. Bernard, to whom, if I am correctly informed, the United States is indebted for its coastwise defences, for he is said to have planned nearly all the large fortifications upon the coast of the United States.

These men undertook to select the best route for a canal. They did not find the true line to be by the way of Worcester and Springfield; the line discovered and indicated by them was the very line which we are now seeking to complete. They followed the Nashua River upwards to the height of ground; continued down the Miller's River and Otter Creek Valleys, a region with which you, Mr. Chairman, are quite familiar [Mr. Lee lives in Templeton, Worcester County]; crossed the Connecticut River high up between Deerfield and Greenfield, saving 270 feet of the depression and rise of the Western Railroad; followed the Deerfield River up by Bloody Brook, passing over the ground where in our early history a savage massacre by the Indians occurred; came to the Hoosac Mountain, and there found that the only route for a canal was through that mountain which we now hope to perforate. They reported that a tunnel for a canal could be constructed for a million of dollars. I have often conferred with Gen. Dearborn upon this subject.

He maintained to the last of his life his confidence in the ultimate success of the project, and I had hoped he would be cheered in his old age by seeing completed what he considered one of the most important of enterprises for the State of Massachusetts.

On passing beyond the mountain they found the Hoosac river, which winds its course through rich and highly cultivated vales to the vicinity of Troy, and indicated the route, not for a railroad, but for a canal which requires low levels.

But it was not then the policy of Massachusetts to construct a canal. It was thought that the coldness of the climate, the long continuance of winter, and the injurious effects of frosts, were insuperable objections and the State decided, wisely I think, (although ere now we might have exchanged the canal for a railroad over the same route,) not to build a canal to connect with the improvements of New York. Besides this there were rumors of other great improvements. Stephenson of England, like Archimedes of old, was pondering over mathematical and scientific problems, which have resulted in railroads and locomotives. They were discovered in 1829 or 1830 and soon after a railroad was commenced in Massachusetts. It was soon ascertained that it could be carried over heights of ground where canals would be impracticable, and subsequently the cities and villages which expanded under their influence drew the State into improvements which opened another route. The Blisses, the Dennys, the Henshaws, the Lincolns, and the Dwights, of Springfield and Worcester, with other leading men, threw their influence in favor of the present route of the Western Railroad. These proved irresistible magnets to the iron way, and it was located through Worcester, Springfield and Pittsfield.

The tunnel was discouraged, because it required time, and the country was urgent for a road. So the Western Railroad, instead of being laid through these low levels on either side of the Hoosac mountain, in the true and the shortest route, was carried over several successive ranges of mountains, in its course lengthening the air line some fifty per cent. It went on its devious way winding over the Charlton summit, first to the left, then to the right, then to the left again; far to the South, down into the valley of the Connecticut, eight miles only from the South line of the State, off again to within twenty miles of the Northern line at Pittsfield, then bending towards the Southern side of the State, and then passing beyond its limits in the direction of Hudson, but soon taking another turn towards Albany. It extends the air line from 140 to 200 miles. It rises first 1050 feet above the ocean, then descends to the Connecticut nearly to a level with tide water, rises from Springfield 1440 feet into the air, descends into Pittsfield valley, rises again, and finally descends to the level of tide water at the Hudson river. With this devious course and great curvature, there are several gradients of 60 and 80 feet per mile, and the freight between the West and the East is carried 1050 feet up into the air, then down to the level of the sea, then up again eight times the height of this State House, then down to the level of the sea again, a thousand tons carried daily up and down, and swinging round and round, lifted and depressed by the mighty power of steam, and that is the connection we now have with the great improvements of the State of New York.

Well, gentlemen, the consequence is what might be predicted. As a local road, communicating with the West, it has become a successful enterprise. It pays dividends, it pays interest on the large loan of the State, it does a vast local business, which it has itself created, earning some \$1,800,000 a year, not by its through business, not by communicating between the West and the sea board, but by the communication it affords between the West and new towns on its line, many of which it has built up entirely. All the towns and villages on its route have been greatly expanded and improved. Worcester, before the railroad, had but 3,500 people; now the population of the city of Worcester is some 21,000. Springfield with its dependencies, had some 4,000 or 5,000; now the population of the same territory is about 20,000. Pittsfield, Westfield, and other towns I have not time to enumerate, have grown up in proportion through the same influence. The road earns now seven per cent. for its stockholders, five or five and a half per cent in-

terest on the State loan, besides making large annual contributions to its sinking fund, and appropriating sums for a second track and other improvements.

All this, as I have said, is done, not by its through business, but by its local business. I said this gentlemen, not unadvisedly, on the contrary, I will give you the strongest possible evidence of the truth of the statement. We have here a report made by Mr. William H. Swift, formerly President and now a Director of the Western Railroad, on the subject of transportation on the railroads in New England. He treats of the cost of conveying freight and passengers over railroads in New England, and more particularly in Massachusetts, and says the result of the experience of the Western Railroad, with which he is particularly familiar, and of certain other railroads, dealing in cumbrous and heavy freights for short distances, indicates a result of an average cost of $2\frac{1}{2}$ cents per ton per mile. On former occasions, gentlemen, we have met the Western Railroad as foes; to-day I am happy to meet them as allies, and to invoke the aid of a former President. He tells us that $2\frac{1}{2}$ cents per ton per mile, or \$5 from Albany to Boston is the average cost of transportation. This has been above the average of the freight charge on the Western Railroad from its opening to the present time. How much margin an average charge of \$5, and an average cost of \$5 leaves for profit, you can determine for yourselves; according to my arithmetic the balance is nothing. The dividends of the Western railroad, so far as freight has contributed to it, then have been derived from the local trade, and not from the through business. In fact its charges for short distances, of 50 or 100 miles, have been nearly as much as for the entire run of 200 miles, and furthermore the charge for 200 miles has to be diminished by a division with the Worcester Railroad.

Now what is the through tonnage of the Western Railroad compared with the whole business to be done. I have here the report of the Western Railroad Corporation printed for the stockholders in January last, in which the through tonnage from Boston to Albany, and from Albany to Boston, is set down at 88,000 tons. The canals and the Central Railway of New York carry to and from the Mohawk Valley nearly 4,000,000 tons annually, but the Western Railroad, laid down to connect the Mohawk with the seaport of Boston, transports but 88,000 tons! This is for the year 1855, and it is the best year the road has upon its list. Why, gentlemen, the entire local and through transportation of the road together amounted very nearly to 400,000 tons. The through business of the road is but little more than one-fifth of its entire business, and if the report of Capt. Swift be reliable, (and it bears his signature, and is circulated among the various railroad companies of Massachusetts,) then one-fifth part of the entire freight business annually of the Western Railroad barely pays expenses. Gentlemen, this through business is hardly three per cent. of the whole business which comes down into the Mohawk Valley, a little less than one-fortieth part of it. It is a small business, and the road can afford to lose it, because, by reason of its summits, and gradients, and curves, it pays no profit. Then with regard to passengers, we find that the Western Railroad does but a very moderate business in through passengers. The total number for the year 1855 is put down at 60,067, or but little more than one tenth of the whole number, 533,310, it transports. This report of the Western Railroad is signed by the President, and also by Capt. Swift, a former President. We have then these two documents, the Western Railroad Corporation giving us the facts as to the amount of traffic, and Capt. Swift giving us the cost, and together proving that there is little profit resulting from the through transportation of that road.

It seems gentlemen, as if these productions of the press were floating along, to aid us, without effort on our part. There comes here a report from another set of gentlemen, the President and Managers of the Philadelphia and Reading Railroad Company, dated Jan. 14, 1856, signed by the President, Mr. John Tucker, a native of Milton, Mass., and by his associate Managers. This gives us remarkably different results from those presented by Capt. Swift. Mr. Tucker tells us his road earned last year \$4,300,000, chiefly from the freight on transportation of coal. The

road has carried over two millions of tons of coal, besides other freight, and some passengers.

The gross receipts for 1855, were	\$4,321,793 84
Expenses and drawbacks,	1,727,878 62
Net income,	\$2,593,915 22

And this was done by the transportation of coal at $1\frac{3}{4}$ cents per ton per mile, very considerably less than the reported cost of through freight on the Western Railroad. The road is 95 miles long, running from the mountainous coal region to Philadelphia, and we find in the summary for the year that the cost of coal transportation is 54 38-100 cts. per ton, actually less than the cost of trucking in Boston. The coal has been at this trifling cost transported from its mountain bed down to tide water, and then loaded into the vessels which were to carry it to eastern markets. The cost for through passengers is stated at only \$1 25 51-100 each, for the entire distance. The cost of coal transportation is here shown to be only 6 mills per ton, instead of $2\frac{1}{2}$ cents as on the Western Railroad, that is, a ton can be carried on the Reading Railroad at one-fourth the cost of transportation over the Western. This illustrates the advantages of a road well built, with favorable levels and grades. This road has one disadvantage to contend with, however for, it has comparatively little return freight. It carries on an average 423 tons of freight on each train, from the summit to the depot, at Philadelphia, but the trains go back empty, making two passages for a single load. If the freight could be divided to run both ways upon a level road, it would require but half the number of cars, and a much larger amount could be carried. As it is, every car is required to undergo the wear and tear of running two miles to do one mile's duty,—and in that particular the road has a disadvantage compared with ours. If we can find a road in Massachusetts with a fountain of freight at either end to supply full loads both ways, with a grade which will admit of carrying an average of 211 tons per train, and with half the cars employed by the Reading road, it follows as a necessary consequence, other things being equal, that freight can be carried over it at rates as low or lower than over the Reading road. There may be some drawbacks, as for instance the loading of coal on the Reading road without expense to the Company, and the unloading by means of a trap door, but these are not serious expenditures. The transportation of coal in open cars also saves some expense, and the use of coal on the locomotives make another reduction. They say they have introduced anthracite coal in their locomotives, and I trust we shall do so too. If they can use coal in Pennsylvania, we can also use it in Massachusetts. But all these advantages amount to but little compared with the advantage of business both ways. The one will offset the other, and I believe it is capable of demonstration that this railroad can carry 180 tons per train on an average both ways, and if the Reading Road can carry for six mills per mile, we can carry for eight. Then if we can do it at eight mills the business is to be done, and it will be brought upon the line.

The question then is, what is the railroad we propose to carry through the Hoosac Mountain, in respect to its capabilities, and how and why can it support itself on low rates of freight? The Troy and Greenfield Railroad has no grade from the West to the East exceeding 40 feet per mile—the highest gradient is 39 feet and a fraction—the same gradient as that adopted by the Boston and Fitchburg Railroad, and it will be submitted in evidence to this committee that the Fitchburg Railroad has carried, of coal and other heavy freight, 250 tons to the train, not only over gradients of nearly 40 feet, but over gradients affected by severe curvatures at the same time. In going from the East to the West there is a gradient of 55 feet, on the Vermont and Massachusetts line, but like those of the Reading road it is not in the direction of the heavy freight, which comes from the West. In order to maintain our average of 180 tons, we come from the West with 240 tons to the train, and go from the East with 120 tons, which is about the proportion of the business. It seems really as if these gradients had been adapted by

nature to the course of the traffic. I venture to say to you, gentlemen, that this line of railroad when opened to Troy will be competent to average at least 180 or 200 tons to the train, instead of the average of 55 tons on the Western Railroad, and that it will be able to carry at rates closely approaching the low rates of the Reading Railroad.

This road has not merely the advantage of gradients, but many other decided advantages over the Western Railroad. Instead of carrying freight over an elevation of 1440 feet, and then pitching it down again to the level of the Connecticut at Springfield, it runs 620 feet below the summit rail of the Western Railroad, where it passes the Hoosac Mountain, and then crosses the Connecticut 135 feet higher than the Springfield Bridge, saving 1500 feet of rising and falling grades. Besides this important saving in grades and summit, this line of railroad accomplishes a great saving in curvature. Every curve over which freight is drawn throws the train out of the line of motion, wears the wheels, shakes the cars, injures their mechanism, and diminishes the tractive power of the engines. But the Troy and Greenfield road obliterates seven entire circles of curvature, making the curvature about 2500 degrees less than on the Western road. The great obstacles to transportation are summits, grades and curves, and we have shown you that in all these elements we make important savings.

I will now call your attention to another important item of saving—the cost of fuel in transportation. In this respect we gain another great advantage, if we use wood, as we must still do to some extent. There are on the line of this railroad immense forests affording almost boundless resources of fuel. The Deerfield valley is far back from the Connecticut and separated from the Hudson by the Hoosac Mountain, so that its forests have not been cleared off like those of more accessible regions. Fuel can be obtained 40 per cent less than on the Western Railroad, and when we consider that the item of fuel constitutes one-fourth of the expense of running trains, a saving of 40 per cent on the fuel is a matter of consequence. Fuel is cheaper throughout the line of the Vermont and Massachusetts Railroad than on the line of the Western, and the Fitchburg road obtains its fuel at Groton Junction, 30 or 40 per cent less than it is sold at Worcester for the Western. It comes to Groton from the great forests, locked up in the valley of the Monadnoc, lately opened by the Peterboro' and Shirley Railroad, and it is sold to the Fitchburg road at \$3 or \$3 50 per cord, when \$5 to \$6 have been paid by the Worcester, and Providence Railroads.

Now, gentlemen, I pass to the last, but still an important element, which is distance. We save 28 miles in distance by this route between Troy and Boston, and we save a greater amount still, when we connect Troy with other important centres in Massachusetts. I have here a table of the saving of distance between Troy and various important centres :

	miles saved.
Troy to Boston and the whole South Shore,	23 miles.
" " Salem,	33 " "
" " Newbury, Haverhill, Lowell and Lawrence,	42 " "
" " Fitchburg,	55 " "
" " Greenfield,	66 " "

This shows an important saving for all these centres, and in the case of Greenfield the actual distance is reduced from 140 miles and a fraction to 80 miles—nearly one-half. To the Cape and the whole South Shore, which finds a way to the West by Boston, we make a saving of 23 miles, of course, the same as to Boston itself. I make the average saving of distance to these various centres some 43 miles, or 21 per cent.

Now, gentlemen, the Western Railroad aids the Southern side of the State including all the towns say West from Newton, and lying on or south of the route of the Western road, and our argument is that the northern part of the State has derived little or no benefit from the aid of the Commonwealth, in the development of its resources. This is a strong point in the case, but it had escaped my attention, and I find no note of it in my brief. While the State has appropriated large sums of money when its wealth was not one-third of what it is to-day, to de-

velope the resources of the southern part of the State, she has done little or nothing for the northern part. According to the ratio of increase since the last valuation, Massachusetts is worth to-day 800 millions of dollars, yet when she possessed less than a moiety of that amount of wealth she loaned to the Western Railroad \$4,000,000 and subscribed to its stock, making the whole amount of aid \$5,000,000. We ask in these days of her prosperity a much smaller amount of aid, to overcome this obstacle, and by this means to produce far more beneficial results than were achieved by her former liberality, for I undertake to demonstrate not only that the measure is of immediate importance to supply us with breadstuffs, and transport our manufactured products to the West, but that it is of great prospective importance, as giving a vast impulse to our foreign trade. It will place Massachusetts nearly quite on a footing with New York in the commerce of the country. This is the demonstration I am now endeavoring to arrive at, and to this end I have prepared, and ask leave to submit, a table of the savings, which will enable us to transport freight at rates so low as to secure a fair share of the traffic between the West and the seaboard. The saving in distance I put down to be on the average 42 miles, or 21 per cent. Then comes the great saving of motive power effected by the low grades, for as you double the power of the locomotive you diminish by one-half the expense of motive power; we carry over our gradients more than double the amount that can be carried over the western railroad by the same power, and, as the motive power is estimated at 36 per cent of the cost of moving the trains, we save here 18 per cent. Then there is a saving of one-third of the cost of fuel, on account of our superior advantages for obtaining it, and the cost of fuel you will bear in mind is an important item in the expenses of any railroad. This we reckon at 5 per cent. In the saving of curvature, removal of seven entire circles, which we rate at one-third the saving in grade, we find another item of 6 per cent. Then in doubling the freight trains we save half the salary of conductors, which amounts to about 2 per cent. Dispensing with half the freight engines we of course save the interest on their cost, which gives about 6 per cent. Finally, we save the ferry, for this line will cross the Hudson river over a bridge. The Western Railroad maintains a ferry between Albany and Greenbush, at a cost of twenty or twenty-five thousand dollars annually, and besides this cost, the whole traffic is thereby subjected to serious inconvenience. Freight from the West is unloaded at Albany at 10 cents per ton, placed in a wagon and transported across the river at 30 or 40 cents per ton, and then unloaded into the train at 10 cents more, making in the aggregate a charge of 50 cents per ton, and including the annual cost of maintaining the ferry, an aggregate cost of 60 or 70 cents per ton on account of the ferry. We place the saving by avoiding the ferry at only 6 per cent, and the whole case may be thus stated:

Saving in distance,	21 per cent.
“ half the motive power,	18 “ “
“ one-third the fuel,	5 “ “
“ curvature,	6 “ “
“ half conductors' salary,	2 “ “
“ interest in half the freight engines,	6 “ “
“ ferry,	6 “ “
 Total amount saved,	 64 per cent.

I saw in a newspaper yesterday a paragraph stating that the New York Central Railroad, which terminates at Albany, has transported during the month of January an amount of freight reaching \$400,000, against \$200,000 for the corresponding month of the previous year, an amount of business, and an increase, gentlemen, at a period when the canals and lakes are closed, and all the lines of communication at the far West are affected, which shows the transcendent importance of this commerce. In order to come over the Western Railroad all that freight must cross the ferry to Greenbush. We dispense with a ferry entirely, and it is an account of the freights, which cross the river in the canal boats, that we estimate

the saving at the low rate of 6 per cent. We have then an aggregate saving of 64 per cent. in bringing the freight into Massachusetts. Of course the saving is less upon that which reaches the seaboard and greater upon that which stops in the interior, but I make the average to be 64 per cent. on the whole and about 54 per cent. on through freight.

Now, if from Captain Swift's average cost of $2\frac{1}{2}$ cents per ton per mile, or \$5 from Albany to Boston we deduct this 54 per cent., it brings the cost down to about \$2.30, making a saving on the freight between the city of Troy and the seaboard of \$2.70 per ton; and if you apply that, Mr. Chairman, to the annual traffic of 800,000 tons, which I estimate to be the amount of tonnage between the East and the West, by all channels, it amounts to an annual saving to Massachusetts of \$2,000,000, which I submit is quite an important saving in these hard times. All this business with the West, gentlemen, is now divided between various channels of trade. It is conducted to a considerable extent by way of New York; to some moderate extent, it passes over the Erie Railroad; to a much less extent it goes through Philadelphia; to a limited extent by way of Baltimore; to a trifling extent it passes through New Orleans; and it avails itself a little of the Western Railroad. Partly by water and partly by railroad, as best we now may, we carry on a vast interchange of commodities with the West. I rate this traffic by all routes at 800,000 tons per annum. If this estimate is too high for to-day it will be too low for to-morrow, and before this tunnel enterprise can be completed, it will be altogether beyond the present calculations.

The question, then, which I have the honor to submit is this: Is a saving of \$2.70 per ton on this vast commerce, amounting in the aggregate to two or three millions of dollars annually, an object worthy the attention of Massachusetts? And how far is it such an object? On this point I beg to refer you to a document which I put into this case. It is a report of the Hearing of this same Railroad Company before a committee of the Legislature of Massachusetts in the year 1853, on the petition for a loan of the State credit to the amount of \$2,000,000. From page 86 of this report I extract the following:

The State engineer and surveyor of the canals of New York, in his report to the Assembly, January, 1853, Assembly Document, No. 28, pages 53 to 58, states the following facts, which have a bearing on this question.

"The dividing of trade between New Orleans and the New York canals is now above the mouth of the Illinois River, but when the Erie Canal is enlarged, it will be extended to the Mississippi, at least as far down as St. Louis. The completion of the enlargement of the Erie Canal will reduce the expense of transportation about 75 cents per ton, which is equivalent to extending the area of its drainage of trade 250 miles, on a river similar to the Ohio; 150 miles on an ordinary canal; 50 miles on a railroad, and 5 to 7 miles on common roads, where these distances are not met by competing lines, and one-half of those distances where they are so met.

"The southern line of the trade drainage of the New York canals is about 1,000 miles long; the increased area of this drainage, which would be caused by the enlargement, would be equal to one-half of either of the North-western States, and embrace a belt of the most productive lands in four of those States.

"A reduction in the cost of transport through the Erie Canal such as that which will be produced by its enlargement, will also increase the amount of trade within the present drainage, by permitting the exportation of many articles of large bulk and small value, which are restrained at the present time by the cost of transportation.

"The whole area of the district, the trade of which concentrates at the eastern end of Lake Erie, is equal to 330,000 square miles. This table shows that seven North-western States and Canada, are an area of over 400,000 square miles, and that their annual agricultural and animal products exceeds 15,000,000 of tons.

"The commerce of the Western Lakes alone is now valued at over \$300,000,000, and annually employs 80,000 tons of steam and 140,000 tons of sail vessels. The amount of flour and grain transported on the lakes, in 1851, was, of flour, 2,000,000 of barrels; of wheat, 8,000,000; of corn, 7,000,000; and of oats and barley, 2,000,000, making an aggregate of over 27,000,000 of bushels of cereal produce.

"The whole exports of the same articles from the United States, in 1851, were but little more than half of the above amount."

The State of New York, gentlemen, the great and provident State of New York, to save 75 cents per ton only on the cost of transportation, taxes her citizens to the amount of many millions, and thereby extends her influence 250 miles by river,

carrying it below St. Louis. To save 75 cents only, a mere truckage, New York is incurring an expense of \$25,000,000 for the enlargement of her great Canal. Now, if New York expends twenty-five millions of dollars to save 75 cents, how much should Massachusetts expend to save \$2.70, and extend her influence four times as far? According to my arithmetic, gentlemen, it would be in the neighborhood of one hundred millions of dollars! But we ask only a subscription to our stock of \$150,000, and that the State take part in the management of the road. Gentlemen, this argument is so forcible, so irresistible, that I take great pleasure in laying it before this committee.

The Erie Canal enlargement saves 75 cents on the transportation of a ton, and thereby reaches to St. Louis, aye, it reaches also the Western Territories beyond the Mississippi; it reaches those vast plains which are now the subject of discussion in the Congress of the United States — those great plains and fertile prairies, so long ranged by the Buffalo, which Col. Fremont describes as appropriate for our vast corn fields, and which I fear before the great question of freedom shall be settled are destined to become fields of blood. It reaches, I say, to where the great and momentous questions of freedom or slavery are now agitated, in the garden of the Union, where the pioneer lies down to sleep at night upon his Sharpe's Rifle, in imminent peril from a foe more dangerous and more cruel than the savage, for unlike the free Indian who struggled only for his own freedom, he is struggling to subjugate the inhabitants of these new lands to the yoke of bondage.

The influence of this Canal enlargement reaches to New Mexico, and connects with New York, the whole of that vast area whose outlet is by the mouth of the Missouri. This twenty-five millions of outlay to save 75 cents per ton produces that result. It is doing it not only for New York but for us, and for the world. When we have made our improvement, we avail ourselves of this enlargement, and we open to Boston and to Massachusetts the commerce of the West, by showing them the best road to the sea.

But it will be said, gentlemen, by those who have not looked this matter in the face—by those who, not having grappled with the subject, have taken only a superficial view, and been discouraged by the apparent difficulties it presents — those who have not the vision to penetrate into the heart of that mountain, and contemplate the vast results to flow from opening this new channel of trade,—it will be said by these rather short-sighted gentlemen, that the cost of transportation from Albany or Troy to the ocean is but trifling, and that trade will naturally flow down to New York instead of taking this new direction. They tell us that for fifty or sixty cents per ton it will be floated down the Hudson to New York, there to be put into ships, distributed to the East and transported to Europe. Let us look this matter for a moment in the face. They have actually built a Railroad from New York to Albany, by the side of the Hudson River, at a cost of some \$10,000,000, a Railroad to compete with the Hudson River in the transportation of passengers and freight! For a quarter part of the year the communication between Albany and New York is sealed up by frost, and were we able to enter into competition with New York for only one-fourth of the year it would be a great object gained.

But the traffic is not carried down the Hudson on an average at the low rates suggested. In the evidence which I shall submit to you, I shall be able to show that the average charge of transportation during the summer season, by the river, is ninety cents per ton, and to this you must add the exposure of goods to the damage incident to water carriage, and the risk of shipwreck, for sloops and barges are often run down and sunk on the Hudson River. Twenty or thirty cents per ton must be added to the cost on account of this exposure to the elements. Then taking the average of freight charges through the year, I make the average cost of transportation between Troy and New York to be \$1.30 per ton. We have shown that we can carry freight between Troy and Boston at \$2.30 per ton, by means of this Tunnel route, and you will perceive that New York still possesses an advantage over Boston of 80 cents per ton. But here is our answer, that when you have advanced as far as Boston you have advanced part way to Europe. You have reached another point in the route. You have also grasped Groton, Lowell, Lawrence, and other important points of distribution. And when you have reached

the sea coast you are 200 miles nearer to Europe and the British Provinces than a New York, and you have besides, a stormy Cape between you and New York. When you take into consideration the high charges of N. York, the saving of time, risk and distance, and more than these, the native energy, thrift, and frugality, of Massachusetts, you will find more than a compensation for this difference of eighty cents in the cost of transportation. If we can bring freight to Boston at a cost of only a little more than two dollars per ton, we place the community then upon a perfect equality with New York for this export trade; and, gentlemen, if the effect of building the Erie Canal has been to carry up the wealth of the City of New York from less than \$100,000,000 to \$500,000,000, as it is to-day, and to build up a population of 900,000 inhabitants in and around that city, making it the great commercial centre of the Union, is it not the policy of Massachusetts to take measures for building up rival cities here, giving them the same advantages which art and science have given to the city of New York? If we have to-day, upon every ton of Western trade an average burden of two or three dollars charged for transportation, which can be removed, is it not the true policy of the State to incur the slight risk which is required to remove it? Such are the grave questions which present themselves to this Committee.

If the City of Boston now pays one-third of the taxes of the State, why not give it an impulse which will enable it to bear two-thirds? And, at the same time, if you can give a corresponding impulse to the interior, and to other sea ports, why not give that impulse also, as well as to the City of Boston? Mr. Chairman, and gentlemen, instead of sending our children and grand-children to seek fortune in New York, and in Chicago, St. Louis, and other cities of the West, why not let them grow up around us at home? Why not let our lands expand in value and our cities enlarge themselves into great marts of commerce? Why build them up in other States? If wealth, fortune, and honor are within our reach, why not grasp them with our hands? These, gentlemen, are suggestions which address themselves to your serious attention.

This brings me directly to the question of the enterprise itself, but I am afraid, gentlemen, I weary your patience, and will not therefore, detain you to prove at length the feasibility of this measure, which has already been proved to the satisfaction of four successive committees, and to the satisfaction of a large minority of the fifth. And let me say, gentlemen, that with these large committees chosen sometimes by our foes, and arranged, it seemed to us, with a view to the defeat of the measure at the outset, the result has been that they have all come to the same conclusion, with a single exception. Four out of five reported in our favor. And it is not a little remarkable, that of the single committee which decided against us, a minority submitted a report which was carried through the House and the Senate, and gave us our charter. I shall not, after so many favorable results arrived at by preceding committees, delay you by a long array of facts to show that this measure is feasible. It has been proved four or five times to the satisfaction of Massachusetts, and we have preserved the evidence upon which these conclusions were based, and this evidence will be presented to you, to be considered at your convenience.

I will, however, as some gentlemen, may not be familiar with the subject, give a brief statement of facts. The Troy and Greenfield Railroad is 40 miles long, perhaps a little over, from Greenfield on the Connecticut to Williamstown. The tunnel itself is $4\frac{1}{2}$ miles in length — 24,000 feet and a fraction — and is found after careful examination by geologists to pass the whole distance through mica slate, and a little lime stone. This slate is soft, and stands in vertical layers like a row of books on the shelf of a library. The tunnel will pass through these layers like a bullet through such a range of books. The rocks are easily perforated, and self-sustaining. A slab of the same kind of rock was laid down in the side walk on Tremont street, in front of the Albion, a few years since, but it was soon worn out by the shoes which passed over it. A portion of our road has already been constructed. In New York, the route is completed from Troy to the Summit, east of Eagle Bridge, a distance of 28 miles, and the citizens of Troy have pledged themselves to fill up the small remaining gap in season to meet us, and will undoubtedly do so.

Permit me to state in this connection that the most expensive tunnels in Europe are not those built through solid rock, but those conducted through clay and earth, where it was found necessary to drive piles and lay foundations, and to build up masonry while the work was progressing. We apprehend little water in our tunnel, and the work will be self-sustaining. A portion of the rock will be taken out by splitting. The estimates have been made at five dollars per yard, but the work thus far shows that the rock can be excavated at three dollars per yard. In this country, there is no tunnel of such magnitude. In England there are two or three tunnels 16,000 feet long, and some of much greater diameter than this. At Marseilles, in France, there is a tunnel three miles long, excavated recently through a much more difficult rock, at a cost much less than two millions. There is in Saxony, a German State, smaller than Massachusetts, a mining tunnel twenty-four miles long! We have no account of the nature of the tunnelling. It is reported to be a continuous tunnel, which was quite a number of years in construction. It was built for the double purpose of draining and giving access to their valuable mines. There are in the coal and copper districts of England tunnels quite as extensive as this of Saxony, constructed for the purpose of taking out the products of the mines. Whole districts near Newcastle and Cornwall are undermined by those expensive tunnels, and they are carried to some extent even under the sea. Instances are related of brooks and rivers disappearing from their beds, and finding outlets through these tunnels. The working of tunnels is by no means as difficult as many imagine, and experience shows that no great precautions are required to secure ventilation. In the Marseilles tunnel, the shafts or openings have all been closed up, and an advantage is gained by preventing the surface water from coming down. Besides, there is no danger of rocks tumbling down the shafts upon the cars passing below. The tunnel is open only at either extremity, and no inconvenience results from closing the shafts. A scientific gentleman reports to the British Government his examination of one of those tunnels, and says he went into it with a small howitzer, and passed a good portion of the day with his party, in firing billets of wood at the roof, to test its soundness. Forty or fifty trains passed through while he was there, and at first he had some apprehensions about the smoke. He soon found, however, that it passed off, rising to the top of the tunnel, and condensing very rapidly against the sides. The same was observed of the sulphurous vapor arising from firing the howitzer. Without passing out of the mouths of the tunnel, the smoke and vapor are resolved into other elements, the heavy particles falling to the ground, and the gases principally condensing against the rock. In constructing tunnels long tubes are used to blow in good air, and expel the impure, but after their completion the passage of trains drives out the gases, or the tunnels keep themselves pure by spontaneous currents, so that one passes through them almost without knowing it. In Europe, I was told, with a merry twinkle of the eye, that misfortunes do sometimes occur in tunnels, and one of the most serious ever known was this: A lady of great personal beauty took passage in the cars, and just before entering a tunnel it was observed that she had a piece of court plaster adhering to her ruby lips. But on emerging from the tunnel it was found the court plaster had mysteriously disappeared, and assumed a new position on the lips of a gentleman sitting by her side. [A member of the committee here inquired if the accident was not attributed to animal magnetism, but Mr. Derby was unable to relieve his anxiety on this point, and he exclaimed, "Mr. Chairman, I go in for the tunnel."]

I hope before the case is concluded to bring before you some of the gentlemen who have entered into contracts to construct this tunnel. They are experienced contractors, and can enlighten us fully in regard to its feasibility. The Company during the past year have increased their subscriptions to some extent. From towns along the line they have obtained \$60,000 or \$70,000, and a considerable amount from individual subscriptions. The contractors take a large interest in the work, but they have not the fortune to carry it on themselves, and require some little assistance. A small amount more of expenditure will enable them to draw the first instalment of the State loan. The terms of this loan are such as not only to guard it carefully, but to keep it just beyond our reach, like the cup of Tantalus.

The State asks us to finish seven miles of railroad, and 1000 feet of the tunnel before receiving the first payment of \$100,000; then when we have completed five miles more, and an additional 1000 feet of the tunnel we receive another instalment of \$100,000; and so on as the work progresses. What we require now is a little aid to enable us to receive the first instalment of the loan. We ask of the State only a moderate subscription, 15 per cent on the amount subscribed to the Western Railroad, and we cheerfully ask the State to take part in the direction of the road. The State has four directors of the Western Railroad, and we ask for the appointment of State directors of our own road to see that the money granted by the State is wisely expended. In these trying times, when all railroad securities are at a discount, a moderate subscription from the State seems necessary to enable us to go forward with courage and confidence.

If it be urged that the expenses of Massachusetts have for the last few years been large, let me reply that we ask merely an advance of the State credit, and that the extraordinary expenses of the past four years will not often recur. We have enlarged the State House and the Prison, have built alms-houses and hospitals, have held a State convention. Let me give you a schedule of these expenses and predict that the roll will not be repeated.

1852.—Enlargement State Prison,	\$111,457 51
New Lunatic Hospital,	60,364 24
State Alms House,	20,257 74
	_____ \$192,079 49
1853.—Convention,	\$154,184 82
Lunatic Hospital, Taunton,	58,228 45
State Alms Houses,	94,255 37
State House enlargramt,	48,361 19
	_____ \$355,029 83
1854.—State Alms Houses,	\$100,488 14
State House enlargramt,	84,915 82
Lunatic Hospital,	66,542 55
	_____ \$251,946 51
1855.—State Alms Houses,	\$50,870 67
State House enlargramt,	102,785 96
Western Lunatic Hospital,	17,343 42
	_____ \$171,000 05
Aggregate.....	\$971,055 88

The first contractors have associated with them some of the strongest and ablest men, commanding considerable capital, who have made some of the tunnels in Pennsylvania. These men have subscribed to a large amount, and will go forward with confidence if the State will lend a helping hand by a subscription of \$150,000, to give them a start.

It is a long voyage before us, requiring from five to six years in its accomplishment. We feel confident that we can finish the work within this period, but that is a long time for any individual to wait. Few men can incur a considerable expenditure and wait so many years for a return. The farmer plants his orchard for posterity, but his expenditure is small. The boldest adventure of Massachusetts is the whale fishery, and in that she surpasses all other States. The merchant however, is compelled to bring the men who make the voyages, into partnership, and they return in two or three years with the spoils of the distant ocean. But in these enterprises the outlay is not very large. Generally an old ship is found, not worth much for other uses, and she is fitted up with stores, provisions, and clothing for the men, purchased usually on long credits.

Gentlemen, our whaling voyage promises to be far more productive to all the interests of Massachusetts, but it requires both a large capital and a long time. Individual courage and enterprise will hardly furnish these, and we look to the State to step forward and give us a lift. Other States have done so for their internal improvements. The State of New York, following the lead of Massachusetts, not only gave her credit, but actually gave three millions of dollars outright to the Erie Railroad. She has expended fifty millions from the public treasury to build her canals, and she is sustained by the people. Pennsylvania has expended large sums on her public improvements, on State account. Virginia makes all her tun-

3 0112 105220708

nels herself, leaving the corporations to build the roads. She is now, I believe, engaged on two or three tunnels on State account. We ask only that the State may become a small partner, taking a small interest, but running little or no risk, for a great object.

The State will be secure on its loan, paying only as the work advances. The road can be run in sections, on each side of the mountain as fast as it is completed, That part on the other side of the mountain coming from Troy, is nearly finished, and the Troy road is already dividing receipts. An arrangement to equip and to run will be made with the Vermont and Massachusetts road, on the other side. All this will be done, and the risk to the State will be a trifling one. Let me ask you, gentlemen, whether in so great an undertaking as this, which is to redound so much for the glory and benefit of Massachusetts, whether it is not incumbent upon the State, not merely to make a loan, but to do something as a partner. Virginia is expending millions and tens of millions for less results than we confidently anticipate, and the question before you gentlemen, is whether Massachusetts, richer than any State in the Union except New York, richer in wealth, education, science, richer in everything that constitutes the greatness of a State,—the question is whether Massachusetts it not rich enough to contribute one-sixth of a million towards carrying out this great undertaking.

Gentlemen, I will detain you no longer, but thanking you for the kind and patient attention you have given me, I here rest the case until it may suit your convenience, to hear evidence in support of these positions.

The Committee then adjourned to meet in the Senate Chamber, on Thursday, March 6th, at 3 o'clock P. M.

NOTE.

At the hearing of this case before the joint committee of the Senate and House, a body composed of seven members on the part of the Senate and thirteen on the part of the House, some very important evidence was given.

Among other testimony, it was testified by F. W. Thayer of the firm of Enoch Train & Co. that his firm managed a line of Liverpool packet vessels of 1000 to 1500 tons, that for 15 years past they had charged from 12 to 24 cents less freight on a barrel of flour from Boston to Liverpool than the charge on a barrel of flour at the same time from New York to Liverpool. That it cost from \$100 to \$150 per day to maintain and run one of their large ships, that their usual passage from Boston to Liverpool was 20 days; return passage usually thirty days; that the run was made by them in three to six days less time than the run between New York and Liverpool; that the port charges on such a vessel in Boston were from \$1000 to \$2000 less than the port charges on the same ship at New York; that the wharves were more convenient, and the vessel was discharged and laden at Boston in a less time by a week than was required at New York, that insurance was effected by the year, that dispatch saved insurance, interest, and current expenses and made each voyage less expensive than the voyage on the New York routes.

He also stated that there was great want of exports at Boston and from the want of breadstuffs and the rise of charges on the railroads they were obliged to suspend shipments and seek outward freights in other ports, although large accumulations of freight were lying at Montreal and other points waiting for a cheaper transit.

It was also testified by A. F. Edwards, Esq., civil engineer, that the cost of fuel was annually rising on the Western and Worcester Railroads, and now ranged from \$5 to \$6 per cord, that the forests were becoming exhausted on this line; that on the Fitchburg which drew its wood from the sides of the Monadnoc, and on the Vermont and Massachusetts and Troy and Greenfield Railroads wood ranged from \$1 50 to \$3 50 per cord; that on this route, from less grades and diminished length, less than one-half the wood would move the same tonnage, and that vast forests existed and would last many years.

Mr. Edwards also submitted a calculation to show that on the new route from superior grades less ascent and curvature, cheaper fuel and avoidance of a ferry, freight could be transported from Troy to Boston at a reduction of 54 per cent. from the cost on the Western Railroad.

It was also shown that the shipping of Boston in June last was 546,268 tons.